

REMARKS

Claims 2, 6, and 9-15 were previously canceled, and new Claims 19 and 20 are presented for consideration by the Examiner. Claims 1, 3-5, 7-8, 6-18, and 19-20 are currently pending in the application.

In view of the following comments, Applicants respectfully request withdrawal of the rejections of Claims 1, 3-5, 7-8 and 16-18, and entry and allowance of new Claims 19 and 20.

Page 2 of the Office Action sets forth a rejection of claims 1, 3-5, 7-8, and 16-18 as being anticipated under 35 USC § 102(b) by Vyvyan et al. (U.S. Patent No. 3,564,789).

Applicants respectfully traverse this rejection. The following comments are provided to identify at least a few features of the claims not found in Vyvyan et al.

Independent Claim 1 is directed to an elongated truss boom adapted to be flattened and coiled to a stowed configuration. The truss boom includes a plurality of longerons arranged parallel to and equidistant from a longitudinal axis of the truss boom forming a polygonal cross section normal to the longitudinal axis, a plurality of fixed battens, and a plurality of moveable battens. The fixed battens and the moveable battens are coupled to the longerons to form a plurality of polygonal frame members which are located in a series of planes normal to the longitudinal axis. The fixed battens interconnect the longerons to form two opposing rigid ladder shaped structures which are moveably connected by movable battens. A first pair of longerons on one of said two opposing ladder shaped structures are spaced apart less than a second pair of longerons on a second of said two opposing ladder shaped structures, so that when the moveable battens are closed and the ladder shaped structures are together when the truss boom is flattened the four longerons are substantially coplanar to permit compact stowing.

The extendable-retractable box beam of Vyvyan et al.'s Figure 1 has four cap members 12, 18, 20, and 22. Two cap members 22 and 12 are joined by rigidly joined intercostal members 26, and two other cap members 18 and 20 are joined by rigidly joined intercostal members 28. The cap members are pivotally joined to the horizontal intercostals members 30. When the box beam structure is collapsed, the intercostals members 30 pivot upwardly, while the rigidly attached intercostal members 28 support the sides 14 and 16. See Figure 3 and column 3, lines 34-75.

It is respectfully submitted that Vyvyan et al. does not disclose a first pair of longerons on one of the two opposing ladder shaped structures being spaced apart less than a second pair of longerons on a second of the two opposing ladder shaped structures, so that when the moveable battens are closed and the ladder shaped structures are together when the truss boom is flattened the four longerons are substantially coplanar to permit compact stowing. There is no indication in Vyvyan et al. that the cap members 12 and 22 are spaced apart less than the cap members 18 and 20. Based on Figure 3 of Vyvyan et al. and the description of the box beam as rectangular (col. 2, lines 4-6), it appears that the cap members 18 and 20 are spaced apart from each other the same distance that the cap members 12 and 22 are spaced apart from each other. Moreover, these distances are maintained by the rigidly joined vertical intercostal members 24, 26, and 28. See col. 3, lines 61-64 and Figure 3. Vyvyan et al., at column 4, lines 25-27, indicates that Figure 3 of Vyvyan et al. shows the box beam in its collapsed configuration. As seen in Figure 3 of Vyvyan et al., the cap members 22 and 12 are not substantially coplanar with the cap members 20 and 18 when the box beam is collapsed.

In contrast, the elongated truss boom as set forth in Claim 1 has two longerons on one side of the truss boom which are closer together than the other two longerons, so that when collapsed, the longerons which are more closely spaced together will be arranged between the other two (more widely spaced apart) longerons, so that the longerons are substantially coplanar. As discussed at page 13, lines 7-17 of the specification and as illustrated in Figures 3-5, two of the longerons on one side of the truss boom fit between the other two longerons when the truss boom is collapsed.

A rejection on the grounds of anticipation is proper only when every limitation recited in a claim is disclosed in the single reference. Since Vyvyan et al. does not fulfill this requirement, Applicant respectfully requests that the rejection of Claim 1 as being anticipated based on the disclosure of Vyvyan et al. be withdrawn.

Nor is there any guidance in Vyvyan et al. to modify the box beam to have these features set forth in Claim 1.

Dependent Claims 2-5, 7-8, and 16-18 are allowable for at least the same reason that Claim 1 is allowable. Nonetheless, a few comments are provided to set forth several differences between the system of Vyvyan et al. and dependent Claim 17 to expedite prosecution.

Dependent Claim 17 recites that instrumentation is attached to fixed battens extending above and below the stowed truss boom so that upon elongating the boom the instrumentation is located at pre-determined points along the boom. Vyvyan et al. does not disclose this feature. Vyvyan et al.'s Figure 13 illustrates dipoles 228 extending away from the box beam, supported by support lines 230. This figure illustrates the operational configuration, rather than a stowed configuration. See column 5, lines 39-55. Vyvyan et al. does not disclose how the support lines 230 or the dipoles 228 are arranged when the box beam is stowed, much less that the support lines 230 or the dipoles 228 extend above and below the stowed truss boom. There is also no indication in Vyvyan et al. that the support lines 230 or the dipoles 228 are fixed. For at least these reasons, Claim 17 is not anticipated by Vyvyan et al.

New Claims 19 and 20 are presented to set forth additional subject matter to which the Applicants are believed to be entitled, and which is not found in the cited references. In particular, Claim 19 sets forth that the truss boom is stowed without a storage container. Support for this language is found at least at page 21, lines 7-15. Claim 20 sets forth that in a stowed configuration of the truss boom, at least one of the plurality of fixed battens extends beyond a width of an outermost pair of the longerons, the truss boom including instrumentation attached to the at least one fixed batten in the stowed configuration and the instrumentation being positioned beyond the width of the outermost pair of the longerons in the stowed configuration. Support for this language is found at least at the paragraph beginning at page 13, line 18. Vyvyan et al. does not disclose a truss boom with the features of Claims 19 or 20. In particular, the box beam of Vyvyan et al. is stored in a box structure 200 (col. 4, lines 26-31). Further, and as generally discussed in the paragraphs addressing Claim 17, there is no indication that the dipoles 228 are positioned outside of the cap members 12, 18, 20 and 22 in the stowed configuration.

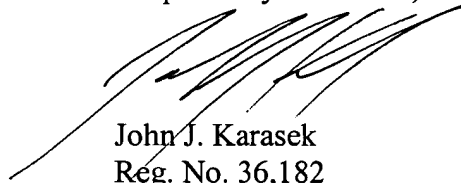
For at least the foregoing reasons, withdrawal of the rejections of Claims 1, 3-5, 7-8 and 16-18, and entry and allowance of new Claims 19 and 20 is respectfully requested.

All of the outstanding matters having been addressed, Applicants request an early indication of the allowability of the application, in the form of a Notice of Allowance. Should any questions arise with regard to this Response, or with regard to the application in general, the Examiner is invited to contact the undersigned at the number listed below.

It is believed that no fee is required for this Amendment. However, the Commissioner is authorized to charge any fee which may be due to Deposit Account No. 50-0281.

Kindly charge any additional fee, or credit overpayments, to Deposit Account No. 50-0281.

Respectfully submitted,



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